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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,833

08/21/2006

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80751/JPW/AJC

9450

23432 7590 07/13/2011
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EXAMINER

SCHLENTZ, NATHAN W

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

07/13/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,833	Applicant(s) FERRIER ET AL.
	Examiner Nathan W. Schlientz	Art Unit 1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 19-25, 27, 28 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 and 19-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27, 28 and 30-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) <input type="checkbox"/> Notice of Informal Patent Application
6) <input type="checkbox"/> Other: _____. |
|--|--|

DETAILED ACTION

Status of the Claims

1. Claims 1-14, 19-25, 27, 28 and 30-33 are pending in the present application. Claims 1-14 and 19-25 are withdrawn from further consideration as being drawn to non-elected subject matter. Thus, claims 27, 28 and 30-33 are examined herein on the merits to the extent that they read on the elected subject matter. No claim is allowed at this time.

Withdrawn Rejections

2. Rejections and/or objections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 27, 28 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker (US 3,725,535) in view of Courtade et al. (US 5,958,438) and Ferrier et al. (US 6,562,757).

Determination of the scope and content of the prior art

(MPEP 2141.01)

Barker teaches preparation of tribasic copper sulfate $[\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2]$ by adding cuprous oxide to $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ and aerating the suspension for 1 hour at room temperature, wherein the precipitate of tribasic copper sulfate comprises 56.4 wt.% cupric ion (Example III). Barker further teaches that the copper chemicals are suitable for use as fungicides (col. 1, ln. 11-14).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Barker does not explicitly disclose including the tribasic copper sulfate compound in a wettable powder formulation, wherein the copper content of the wettable powder is between 30 and 45 wt.%. However, Courtade et al. teach wettable powder compositions comprising 45.5-75.5 wt.% dry Bordeaux mixture in combination with

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synthetic fungicides (mancozebe, zinebe, cymoxanil, folpel, manebe), dispersing agents, wetting agents, anti-foaming agents, dyes and kaolin (Examples 3-5). Substituting the tribasic copper sulfate compounds of Barker in the place of the dry Bordeaux mixture in Examples 3-5 of Courtade et al. results in wettable powders comprising $[\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2]$ wherein the copper content of the wettable powder is 25.7-42.5 wt.%.

Barker also does not explicitly disclose fungicidal compositions comprising a mixture of brochantite and antlerite, wherein the total copper content is between 30% and 45% by weight, as instantly claimed. However, Ferrier et al. teach that antlerite and brochantite are both copper sources for plant-protection compositions wherein they are active fungicides (col. 3, ln. 13-19).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-43)

Therefore, it would have been *prima facie* obvious for one of ordinary skill in the art at the time of the invention to formulate the tribasic copper sulfate of Barker into wettable powders for application as a plant fungicide, wherein the wettable powders are prepared according to Courtade et al. with the tribasic copper sulfate of Barker substituted in the place of the dry Bordeaux mixture of Courtade et al. Substituting the tribasic copper sulfate compounds of Barker in the place of the dry Bordeaux mixture in Examples 3-5 of Courtade et al. results in wettable powders comprising $[\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2]$ and a synthetic fungicide, wherein the copper content of the wettable powder is 25.7-42.5 wt.%. Furthermore, it would have been *prima facie* obvious for one of

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ordinary skill in the art to combine brochantite, according to Barker, and antlerite as the copper sources for plant protection since Ferrier et al. teach both brochantite and antlerite are suitable fungicidal copper sources. Such would have been obvious in the absence of evidence to the contrary because it is generally prima facie obvious to use in combination two or more ingredients that have previously been used separately for the same purpose to form a third composition useful for that same purpose. The idea of combining them flows logically from their having been taught individually in the prior art. *In re Kerkhoven* 626 F.2d 646, 850, 205 USPQ 1069, 1072 (CCPA 1980).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to Arguments

Applicant argues on page 11 that tribasic copper sulfate cannot be equated with brochantite because brochantite is a specific form of tribasic copper sulfate, i.e. "tribasic copper sulfate" is a genus, and "brochantite" is a species of the genus. There is no teaching in Barker that the tribasic copper sulfate is in the form of brochantite.

The examiner respectfully argues that the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration include statements

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regarding unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the author(s) of the prior art derived the disclosed subject matter from the applicant. See MPEP 716.01(c)(II). Applicant is arguing that the process of Barker does not produce brochantite, but does not provide any evidence to support this assertion.

Also, Barker teaches that tribasic copper sulfate $3 \text{ Cu}(\text{OH})_2 \cdot \text{CuSO}_4$, a well-known fungicide, is usually prepared by subjecting metallic copper to the action of sulfuric acid and air, resulting in a solution of copper sulfate, which is then treated with ammonium hydroxide to give the desired tribasic copper sulfate, which is expensive and yields unwanted by-products (col. 1, ln. 11-31). Barker teaches that their invention offers a method of making this and similar copper chemicals simply, directly, and inexpensively, and without unwanted by-products (col. 1, ln. 32-34). Tanabe et al. (US 3,404,951) teach that addition of an alkali solution to a copper sulfate solution usually forms brochantite only (col. 2, ln. 1-3). Therefore, in the absence of evidence to the contrary, it is believed from the teaching of Barker and Tanabe et al. that the method of Barker produces brochantite.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Schlientz whose telephone number is 571-272-9924. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NWS

/John Pak/

Primary Examiner, Art Unit 1616